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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/726,372	12/01/2000	Hans-Rudolf Nageli	ATM-2273	5299

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EXAMINER

TSOY, ELENA

ART UNIT

PAPER NUMBER

1762

DATE MAILED: 02/13/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/726,372

Applicant(s)

NAGELI ET AL.

Examiner

Elena Tsoy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 February 2003.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 28-54 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 28-54 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Applicant's request for issuance of new Office Action is persuasive and, therefore, the Office Action mailed January 9, 2003 (Paper No. 7) is withdrawn. The new Office Action is as follows:

In the Title

A new Title has been entered.

In the Abstract

A new Abstract filed on November 26, 2000 has been entered.

In the Specification

The amendment filed on November 26, 2002 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: "The temperature of the aluminum foil, with which the coextruded plastic and adhesion-promotion agent is being combined, is such that the temperature at the surface of the plastic coating and the adhesion-promotion agent lies *below* the crystallite melt point (Tk) of the plastic".

Applicant is required to cancel the new matter in the reply to this Office Action.

Response to Amendment

2. Amendment filed on November 26, 2002 has been entered. Claims 1-27 have been cancelled. New claims 28-54 have been added. Claims 28-54 are pending in the application.

Claim Objections

3. Claim 28 is objected to because of the following informalities: “combine” in line 4 is suggested to change to “combining”.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 28-54 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. A recitation “the temperature at the surface of the plastic coating (14) and the adhesion-promotion agent (16) lies *below* the crystallite melt point (Tk) of the plastic” in independent claim 28 is a new matter since it was not described in the specification as filed.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 28-54 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 28, lines 6-7, 11-12, “the temperature at the surface of the plastic coating (14) and the adhesion-promotion agent (16) lies” renders the claim indefinite because it is not clear

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whether it is outer non-coated surface of plastic (14) or surface between the plastic (14) and agent (16). For examining purposes the phrase was interpreted as outer non-coated surface of plastic (14).

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. **Claims 28, 29, 51, 52** are rejected under 35 U.S.C. 102(b) as anticipated by Heyes et al (US 5,093,208).

As to claims 28, 52, Heyes et al disclose a process for production of an aluminum foil (See column 2, lines 15-24) coated with a sealable and sterilizable plastic based on polypropylene (PP) comprising co-extruding the plastic with maleic anhydride (MAH) graft modified PP (an adhesion promoting agent) and combining co-extruded PP composite with the aluminum foil between two rollers (See Fig. 1; Table I, type H; column 8, lines 9-19), the temperature at the outer surface of the plastic lies below the (crystallite) melt point (T_k) of the plastic (See column 3, lines 25, 46-47), then passing continuously the coated aluminum foil through a heater 10 (oven) to increase the adhesion strength between the aluminum foil and the plastic coating (See Fig. 1; column 7, lines 12-16) with a temperature set so that the temperature at the outer surface of the plastic lies above the (crystallite) melt point (T_k) of the plastic (See column 3, lines 48-51), and quenching (cooling in a shock-like manner) the coated aluminum foil such that the

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crystalline plastic is converted to non-crystalline or amorphous form (i.e. crystalline proportion at least in the surface area of the cooled PP layer is as small as possible) (See column 1, lines 45-47; column 2, lines 1-15; column 3, lines 39).

It is the Examiner's position that the surface area of the cooled PP layer has claimed properties such that if the quenched non-crystalline plastic still has small amount of crystals, then the crystal grains are as small as possible *inherently* since it is produced by a method identical or substantially identical processes to that of claimed invention.

It is held that where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, *claimed properties or functions are presumed to be inherent*. See MPEP 2111.02, 2112.01. In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). "When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not." In re Spada, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

As to claim 29, re-heating temperature is 270 °C (See Table II, type H; column 8, lines 9-19), which is at least 20 °C above crystallite melt point (T_K) of PP since T_K of PP is around 160°C, as evidenced by applicants (See specification, page 3, line 33). Consequently, temperature of the heater 10 (oven) is also at least 20 °C above T_K of PP.

As to claim 51, the quenching (shock-like cooling) is carried out by cold water (See column 8, lines 6-8, 19).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. **Claims 30-50, 53, 54** are rejected under 35 U.S.C. 103(a) as being unpatentable over Heyes et al (US 5,093,208) in view of Takano et al (US 5,837,360).

As to claims 30-35, 48, 49, Heyes et al, as applied above, fail to teach that: T_E of shock-like cooling is at least 40°C below T_K of PP (Claims 30, 48) or at least 60°C (Claim 31) or at least 80°C below T_K of PP (Claim 32); the shock-like cooling speed (V_A) is greater than 10°C/sec (Claims 33, 49), greater than 50°C/sec (Claim 34) or greater than 100°C/sec (Claim 35).

Takano et al teach that the shock-like cooling of metal foil coated with co-extruded PP plastic/MAH modified PP (See column 2, lines 1, 54-55, 61-67; column 3, lines 1-6) and heated above T_K of PP based layers (See column 5, lines 35-52) with a speed (V_A) greater than 10°C/sec (See column 6, lines 10-12), or greater than 50°C/sec , preferably greater than 100°C/sec (See column 6, lines 10-12) so that T_E of the shock-like cooling is at least 55°C (See column 5, lines 59-63), reduces crystallinity of PP based layers to not more than 55 % thereby providing the coated metal foil with superior corrosion resistance and peeling resistance (See column 1, lines 57-62; column 2, lines 9-11).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have carried out shock-like cooling of metal foil coated with co-extruded PP

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plastic/MAH modified PP in Heyes et al under conditions of Takano et al with the expectation of providing the coated metal foil with desired superior corrosion resistance and peeling resistance, as taught by Takano et al.

As to claims 36, 39-43, 50, Heyes et al fail to teach that shock-like cooling is carried out by partial looping over at least one cooled roller (Claims 36, 50) or by passing through ice-cooled water (Claim 39) or by spraying with liquid coolant (Claim 40) such as water (Claim 41) or by means of gas (Claim 42) or by means of cooled gas (Claim 43).

Takano et al teach that the shock-like cooling can be carried out by *any* known means provided that cooling conditions are satisfied (See column 6, lines 24-27). Water spray and partial looping of a metal foil containing laminate over at least one cooled roller are well known means for shock-like cooling of the laminate, as evidenced by Levendusky et al (US 5,919,517, column 3, lines 29-60; column 12, lines 23-24; column 14, lines 34-53). Ice-cooled water and cooled gas are also well known conventional means for shock-like cooling laminates.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used any cooling conventional means including ice-cooled water, cooled gas, water spray or partial looping over at least one cooled roller of a metal foil containing laminate shock-like cooling of a coated metal foil of Heyes et al in view of Takano et al since Takano et al teach that the shock-like cooling can be carried out by any known means provided that cooling conditions are satisfied.

As to claims 37, 38, Heyes et al further teach that shock-like cooling is carried out by passing through water (See Fig. 1).

As to claims 44, 45, Heyes et al further teach that an adhesion promoting agent is copolymer of propylene such as maleic anhydride (MAH) graft modified PP (See column Table I, example H).

As to claim 46, claim 46 is not addressed as further limiting *non-selected* member of Markush group.

As to claim 47, Heyes et al teach that it is *preferred* to laminate coextruded hot PP-based layers to a heated aluminum foil (See column 3, lines 40-45), and then re-heat the coated aluminum foil. Heyes et al fail to teach that aluminum foil is at room temperature when the aluminum foil is combined with coextruded PP-based layers.

Takano et al teach that PP-based layers on metal foil should not be allowed to cool to 100 °C or lower since MAH modified PP crystallizes rapidly from about 100 °C (See column 5, lines 42-52) to provide the coated metal foil with superior corrosion resistance and peeling resistance (See column 1, lines 57-62; column 2, lines 9-11).

Common sense dictates that temperature drop to 100 °C or lower can be prevented in a process of Heyes et al even when hot coextruded PP-based layers are laminated to an aluminum foil at room temperature if aluminum foil enters a heater 10 shortly or right after laminating.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used an aluminum foil at room temperature for laminating with hot coextruded PP-based layers as long as temperature of the coated aluminum foil is not allowed to drop to 100 °C or lower with the expectation of preventing crystallization of PP-based layers thereby providing the coated aluminum foil with the desired superior corrosion resistance and peeling resistance, as taught by Takano et al.

As to claims 53, 54, Heyes et al further teach that coated aluminum foil made by a process comprising shock-like cooling of heated coated aluminum foil can be used for making cans (See column 1, lines 14-19). However, Heyes et al fail to teach that that plastic coated metal cans may be used for packaging moist food including animal feed.

Takano et al teach that PP coated aluminum foil made by a process comprising shock-like cooling of heated coated aluminum foil provides the coated aluminum foil with superior corrosion resistance and peeling resistance (See column 1, lines 57-62; column 2, lines 9-11).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used PP coated aluminum cans made by a process of Heyes et al for packaging moist food including moist animal feed since Takano et al teach that PP coated aluminum foil made by a process comprising shock-like cooling of heated coated aluminum foil provides the coated aluminum foil with superior corrosion resistance and peeling resistance.

Response to Arguments

12. Applicant's arguments with respect to claims 28-54 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elena Tsoy whose telephone number is (703) 605-1171. The examiner can normally be reached on 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive Beck can be reached on (703) 308-2333. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Elena Tsoy
Examiner
Art Unit 1762

February 6, 2003



SHRIVE P. BECK
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